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Region 3
6th and Walnut Streets
Philadelphia, PA 19106

May 1980



Final Environmental

903R80004

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Final Environmental Impact Statement

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Horsham-Warminster- Warrington, Pennsylvania Wastewater Treatment Facilities

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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION III

6TH AND WALNUT STREETS
PHILADELPHIA, PENNSYLVANIA 19106

MAY 7 1980

TO ALL INTERESTED AGENCIES, PUBLIC GROUPS, AND CITIZENS:

Enclosed is a copy of the Final Environmental Impact Statement (EIS) prepared by the U.S. Environmental Protection Agency (EPA) in conjunction with wastewater treatment facilities plans and applications for Federal construction grants jointly submitted by the Horsham Township Sewer Authority, Montgomery County; Warrington Township Municipal Authority, Bucks County; and the Warminster Township Municipal Authority, Bucks County within the Commonwealth of Pennsylvania.

Pursuant to the National Environmental Policy Act of 1969 and regulations promulgated by this Agency (40 CFR Part 6, November 6, 1979), this Final EIS is submitted for your review. Comments or inquiries concerning this EIS should be submitted to the above address, attention of the EIS Preparation Section, by June 16, 1980.

EPA has determined that two alternatives are eligible for Federal funding. The Agency's preferred project (Alternative 3) consists of the conveyance of Horsham's flows through Lower Gwynedd Township to the Ambler sewage treatment plant (STP) and the use of community systems for Horsham Township. EPA's second choice (Alternative 2) for funding eligibility would send the flow from specific subareas in Horsham Township for treatment at the Ambler STP. Either alternative endorses the same approach for the Warrington-Warminster portion of the planning area; namely, the conveyance of wastewater from Warrington Township via the Little Neshaminy interceptor to Warminster STP. The Warminster STP would accordingly be expanded and upgraded, if necessary, to treat this additional flow.

I wish to thank each applicant for the assistance they have provided to EPA's staff during this EIS process. In addition, I wish to commend the performance of the Central Contacts Committee which supplied guidance to EPA on important technical decisions involving the evaluation of alternatives for the planning area. Finally, I want to especially recognize the interest demonstrated by the area's citizens. Their participation throughout this EIS Process has greatly contributed to the development of acceptable solutions to the sewage problems of the participating municipalities.

A public meeting regarding the Final EIS will be held on May 29, 1980 at 7:30 p.m. in the Keith Valley Middle School. Both the public and representatives of organizations are encouraged to attend and express their comments and opinions on EPA's recommendations.

Sincerely, yours,

A handwritten signature in dark ink, appearing to read "Jack J. Schramm", written over a horizontal line.

Jack J. Schramm
Regional Administrator

U.S. EPA Region III
Regional Center for Environmental
Information
1650 Arch Street (3PM52)
Philadelphia, PA 19103

Response to Issue 4

The current rated capacity of the Warminster STP is 4.58 mgd. This is a temporary rating pending its expansion. According to PA-DER, the design capacity rating of the expanded Warminster STP should be derived in the following manner. Average annual flow into the Warminster STP from December 1978 through November 1979 was 5.45 mgd. Dry weather flow into this plant during this period was estimated to be 3.89 mgd. The difference between the average annual flow and the dry weather flow represents infiltration and inflow to the system under wet weather conditions. I/I contribution amounted to 1.56 mgd (5.45 - 3.89). Fifty percent removal of I/I would reduce this contribution to 0.78 mgd.

The design capacity rating of the Warminster STP under Alternative 1 is estimated as follows:

Average Annual Flow:	+ 5.45
+ Projected Expansion:	+ 3.80
- I/I Removal:	- 0.78
	<u>8.47</u>

The design capacity rating of the Warminster STP under alternatives 2 through 5 is estimated as follows:

Average Annual Flow:	+ 5.45
+ Projected Expansion:	+ 3.30
- I/I Removal:	- 0.78
	<u>7.97</u>

Issue 5

The Horsham Land Management Plan delineates planning districts within the Township. How were these planning districts considered in delineating subareas within the EIS planning area?

Response to Issue 5

As discussed in Section 1.8 of the Draft EIS, the subareas were delineated on the basis of hydrologic boundaries, municipal political boundaries, documented problems of malfunctioning on-lot disposal systems, known areas of projected development planning, and existing service area and development patterns. In Horsham Township, information regarding projected development planning and existing development patterns was gathered in part from the Horsham Land Management Plan. The planning districts of that plan were an important determinant in choosing subarea boundaries. Subareas 6 and 7 conform closely to Land Management District 3 (1.5 unit/acre), subarea 5 is almost entirely within Conservation District 1 (1.0 unit/acre district); and subarea 4 is almost entirely in Conservation District 2 (0.5 unit/acre district). Subarea 8 is in both Land Management Districts 2 and 3.

In Warrington Township, the entire planning area is situated in a single planning district with a proposed housing density of 2.0 units/acre.

Issue 6

Water authority officials in Bucks and Montgomery County face a groundwater contamination and water supply problem reportedly traced to the presence of trichloroethylene (TCE). Evidence of TCE has been found specifically in wells in Warminster, Warrington, and Horsham Townships. What is the significance of TCE contamination as reported recently and what effect would this problem have on proposed wastewater facilities in the planning area?

Response to Issue 6

Since May 1979, there has been an extensive effort by the Bucks County Health Department (BCHD), PA-DER and the US-EPA to identify the causes and extent of organic chemical contamination of groundwater in Bucks County. The primary contaminants under consideration are trichloroethylene (TCE) and perchloroethylene (PCE) both of which are commonly used industrial solvents. Both organic chemicals are known carcinogens and toxic to humans. Guidelines established by US-EPA indicate potential carcinogenicity at levels above 4.5 parts per billion (ppb) and acute toxicity at levels above 225 parts per billion (ppb).

Sampling of all municipal water supplies as well as numerous private water supplies for TCE/PCE was started in August 1979. The affected municipal water supplies in the planning area were impacted as follows:

Horsham Township Authority: Eleven wells and a small surface source were tested prior to October 2, 1979. All concentrations were less than 1.0 ppb TCE and less than 3.0 ppb PCE.

Warrington Township Authority: Two of four municipal wells were taken off-line from the distribution system with concentrations exceeding 120. ppb TCE and 0.9 ppb PCE. With two wells off-line, the Authority is purchasing water from Warminster Township.

Warminster Township Authority: Six of fifteen municipal wells have been contaminated and three of these are now off-line. Those wells which are contaminated and off-line have concentrations near 260 ppb of TCE and 250 ppb of PCE. There may be a water quantity problem in the Warminster Township Authority service area if demand increases in the spring of 1980.

Warminster Heights Authority: The authority operates two wells, both of which are contaminated with TCE/PCE in concentrations greater than 20 ppb. Both of the wells are still on line because there is no provision for connection to an alternate source.

In summation, these four geographic areas have experienced contamination problems. If the contaminated wells cannot be returned to service, then there may be a number of water supply problems encountered in the planning area during 1980.

A number of private water supplies in these areas also are contaminated. The total number of wells with this conditions may exceed two hundred. If these wells prove to be contaminated continually, then the private home owners may be forced to consider connection to one of the available public water supplies, which are already under the stress of diminished quantity. In addition, the presence of TCE/PCE in the groundwater also may be indicative of more widespread organic contamination and may present the possibility of further decrease of quantity due to affected groundwater sources.

With respect to proposed wastewater facilities, the major issue centers on the permanency of the problem. If augmented water supplies and water conservation practices are sufficient to allow demand to be met adequately and safely, then minimal effect on wastewater facilities would be anticipated. If stringent water conservation practices were required and were successful in reducing significantly the per capita water demand, then the sizing of wastewater conveyance and treatment facilities as discussed here would exceed actual need.

Issue 7

The Draft EIS addressed the suitability of soils on undeveloped lands for on-lot treatment systems. These systems include conventional septic tank-soil absorption systems and sand mound-soil absorption systems. Did US-EPA consider the extent of soils suitable for land application of wastewater (i.e. spray irrigation or overland flow) and if so is this means of wastewater treatment feasible based on soil conditions?

Response to Issue 7

US-EPA examined the suitability of soils for slow rate land application systems in its analysis of subarea baseline conditions. Areas with suitable soils were delineated on a USDA Soil Conservation Service (USDA-SCS) soils series map for Montgomery County. Only those sites occurring in vacant undeveloped land areas were considered as potential land application sites. The suitability of soils